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AMENDMENTS TO THE CLAIMS

The listing below of the claims will replace all prior versions and listings of claims in the present application:

**Listing of Claims:**

Claim 1 (currently amended): A method of producing a molybdenum-silicide- type based heating element containing essentially molybdenum silicide and alloys of that material, said method comprising the steps of: producing a heating element material that contains substantially  $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$  and  $\text{Al}_2\text{O}_3$  by mixing a molybdenum aluminum silicide  $\text{Mo}(\text{Si}_{1-y}\text{Al}_y)_2$  with  $\text{SiO}_2$ , wherein the  $\text{SiO}_2$  replaces bentonite clay in molybdenum silicide heating element compositions containing bentonite clay and is at least 98% pure, and wherein x lies in the range of 0.4 - 0.6; and forming a heating element from the produced material, wherein the heating element includes on its surface ~~a protective~~ an oxide layer consisting essentially of  $\text{Al}_2\text{O}_3$  that , which oxide layer does not peel from the surface of the heating element under thermal cycling of the heating element between room temperature and about  $1500^\circ\text{C}$ , whereby heating oven contamination in the form of peeled heating element oxide layer particles in a heating oven containing the heating element is prevented.

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Claim 2 (previously presented): A method according to Claim 1, wherein the  $\text{SiO}_2$  present in the mixture is a silicate and does not affect molybdenum silicide crystal lattice symmetry.

Claim 3 (canceled)

Claim 4 (previously presented): A method according to Claim 1, wherein  $x$  lies in the range of 0.45 - 0.55.

Claim 5 (previously presented): A method according to Claim 1, including the step of partially substituting at least one of Re and W in the material  $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$  for molybdenum.

Claim 6 (currently amended): An electrical heating element that is substantially ~~of the~~ molybdenum silicide ~~type~~ and alloys of that material, said element consisting essentially of the materials  $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$  and  $\text{Al}_2\text{O}_3$ , wherein  $x$  lies in the range of 0.4 - 0.6; wherein  $\text{SiO}_2$  having a purity of at least 98% is included in the material for replacing bentonite clay in molybdenum silicide heating element compositions containing bentonite clay; and wherein the heating element includes on its surface ~~a protective~~ an oxide layer consisting essentially of  $\text{Al}_2\text{O}_3$  that which oxide layer does not peel from the surface of the heating element under thermal cycling of the heating element between room temperature and about  $1500^\circ\text{C}$ , whereby heating oven contamination in the form of peeled

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heating element oxide layer particles in a heating oven containing the heating element is prevented.

Claim 7 (canceled)

Claim 8 (previously presented): A heating element according to Claim 6, wherein x lies in the range of 0.45 - 0.55.

Claim 9 (previously presented): A heating element according to Claim 6, wherein molybdenum in the material  $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$  is partially replaced with at least one of Re and W.

Claim 10 (previously presented): A method according to claim 2, wherein the silicate is mullite.

Claim 11 (previously presented): A method according to claim 2, wherein the silicate is sillimanite.